rumor. This was evident in the early days of our epidemic, when several hundred persons applied daily to the Los Angeles General Hospital for admission for themselves or their children. The hospital was forced to accept these cases until they were proved not to be poliomyelitis, and hospitalization became a major problem within a few days. With the establishment of this Poliomyelitis Board, and a full explanation to the public concerning the situation, stressing precautional measures and prompt adequate medical care, this acute hospital situation was relieved.

I cannot recommend too forcibly the establishment of a coördinating unit, carefully selected, to arrange policies, to prevent and control major epidemics, in every large center of population where multiple health units are in existence.

MORBIDITY INCIDENT TO PREGNANCY*

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IT seems quite natural that one country, one hospital, one clinic, or even one individual should desire to compare results with another, for in this way we are inspired to improve our condition. In the United States, at the present time our attention is focused on maternal mortality. Comparative tables give us the unenviable position of having one of the highest maternal death rates in the world. It is exceedingly urgent that all forces be concentrated upon reducing this embarrassing situation.

IMPORTANCE OF MORBIDITY INCIDENTAL TO PREGNANCY

There is another consideration which is even more important than fatalities, and that deals with the morbidity incidental to pregnancy. When we concern ourselves with mortality alone, we take into account only our complete failures. For some years various reports have made comparisons of the respective morbidity, as well as mortality. While there are some minor differences in the evaluation of morbidity, usually it is defined as an elevation of temperature to 100.4 degrees Fahrenheit for two successive days. Although this may be the only available yardstick, capable of mathematical interpretation, it is very inadequate and misleading. A febrile puerperium may leave no after-effects whatsoever, while a patient without any elevation of temperature may have suffered damage which will never be corrected. In speaking of morbidity we cannot be content with thinking only of a febrile puerperium, but we must include also any damage or symptom which may produce incapacity or annoyance. Only recently a patient asked me if it was safe to have another baby, inasmuch as she has had so much pain in the coccyx since the first baby came that she can hardly remain seated. If we examined our patients six months or a year postpartum, we would discover a number of items that might be deserving of tabulation, and would really be an evaluation of our unfavorable results. The more common ones would be lassitude, headache, pain in the abdomen, backache, urinary sphincter incompetence, anemia, lacerations, retroversion, and subinvolution. It does not follow that all of these are the result of faulty obstetrics; but when such disabilities occur as a result of pregnancy or are aggravated by it, it is our responsibility to reduce the incidence.

Perhaps these items sound too insignificant, but nevertheless they account for much unhappiness and suffering among women, not to mention the financial outlay for treatments, hypodermics, drugs, and even operations. It is too well known that many of these symptoms are never completely eradicated in spite of all treatments and operations. Furthermore, a gynecological patient sometimes dies following operation. Might not this be considered a remote obstetrical death, one emanating from a form of maternal morbidity?

While these items have not been included in the various tabulations, I do not mean to infer that they have been totally neglected. On the contrary, much has been done. The literature is filled with considerations of the numerous obstetrical problems, with suggestions for improving the end-results. Prenatal care has brought the focus of attention upon various infirmities, the correction of which improves the condition of the patient. During the past twenty-five years, students and internes have received abundant instruction in obstetrical management and obstetric operations, so that a larger number of women are attended by men with more mature experience in obstetrics. Hospitals also have been moved to action. Obstetrical departments have been removed from some obscure corner of a medical floor to a dignified station in the hospital. For the after-care of a new mother some items have been emphasized; but there is still a definite tendency to drop the patient as soon as she has left the hospital. More postpartum attention and instruction are necessary.

VALUE OF PRENATAL CARE

The beneficial influences of prenatal care have been felt in the management of such complications as heart disease, tuberculosis, and toxemia, by starting treatment before they become emergencies and before too much damage has taken place. In toxemia, especially, have we noticed the influence. By ordering a patient to bed on a milk diet as soon as any hypertension appears, we may spare her a life of invalidism from chronic nephritis. If treatment is begun with the first signs, these may be entirely erased, but if we wait for a higher blood pressure and for albuminuria, response to treatment will be disappointing. Too often treatment is haphazard until enough damage has been done, so that the disease becomes uncontrollable.

Blood Counts.—A blood count is made on every surgical patient and the operation postponed if it is not satisfactory. Yet very few obstetrical patients have blood counts at any time. Many patients will show an anemia beyond that expected

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from the relative drop due to increased blood volume. If this was not detected before she became pregnant, certainly the count and hemoglobin can be raised by giving liver substance, reduced iron, etc., before time for confinement. Might not this prevent a prolonged puerperium, months of lassitude, etc.? A non-pregnant woman will receive energetic enough treatment if her blood count is found to be low, so why not the pregnant one?

Weight Observations. — Patients are being weighed regularly to detect a sudden rise in weight indicative of toxemia, but that is an item of lesser importance. It is pretty definitely established also that an infant inherits certain qualities through its parents which determine its size, and that a small baby cannot be produced by deliberate starvation, even though overweight babies will be less likely when the patients do not overeat. Our greater concern, however, is for the mother, who will find herself considerably overweight after the baby comes. Sometimes she has not given her weight sufficient attention antepartum. Afterward she is willing to resign herself to a life of dieting, exercise (sometimes), and will be the victim for many nostrums whether diet or drug. It might have been much simpler to have exercised a bit more control when this weight was being deposited. We grant that there are concealed, not sufficiently well-understood influences, probably endocrine in origin, which control the deposition of adipose tissue, and that other therapy may be indicated besides a reduced diet.

Mastopexy.—An increasing number of women are willing to suffer the discomfort and expense of a mastopexy. Early in pregnancy the increased weight of the breast gradually stretches the connective tissue which gives the breast its support, and she is greatly chagrined to find herself with "hanging breasts" afterward. Many women elect not to nurse their babies, fearing such a catastrophe. Even that may prove disappointing. The attention must be given when she first becomes pregnant. As soon as she is conscious of increased weight, a properly fitted supporting brassière should be purchased and worn during the entire period. This must be replaced after delivery by another brassière, whether she is nursing the baby or not.

Constipation.—Constipation frequently follows confinement. When the situation is critically analyzed, we find that it really began in early pregnancy. A definite routine should be instituted during pregnancy and, if insufficient, should be supplemented with mild laxatives taken regularly. The fear of constipation often prevents patients from taking small amounts of laxative regularly and, instead, occasional large doses are taken which I think are far more detrimental. This mismanagement frequently brings on hemorrhoids. These also may disappear if a vigorous routine is instituted at once. The patient should go to bed, and wet, astringent dressings and an ice-bag should be applied until they disappear.

Bladder Irregularities. — Bladder irregularities occur frequently enough, so that several writers have repeatedly pointed out the importance of keeping the bladder empty during labor, and not allowing it to become distended postpartum. I sometimes wonder if some of the symptoms do not result from insufficient lubrication of the catheter. Nurses are often careless about this item.

ASEPSIS AND TECHNIQUE IN DELIVERY

The delivery itself cannot be considered in any other light than a major operation of the most dignified character. The increasing emphasis placed on asepsis and technique is well merited. If a simple surgical operation is deserving of an anesthetist and two nurses, why not a delivery? If special training and qualifications are necessary for surgery, why not for obstetrics?

The personnel of an operating room is so arranged as to properly manage a certain number of operating rooms. Operations are so scheduled as to be capable of handling in an orderly manner. Deliveries, unfortunately, cannot be scheduled, nor can they be postponed until a room is available, nor will they wait until the proper nurses are available; and yet the delivery suite organization seldom provides for more nurses than can properly manage one delivery room. Somehow the hospitals do not sense their responsibility for more than one room, and when two or three deliveries occur at the same time or in close succession, they are blissfully satisfied in having "gotten by."

Perhaps the budget will not allow for more people constantly on duty. In that event it should be possible to draft additional nurses, previously trained, from the operating room, the nursery, or from a clean floor. These people must have experience in the routine of your delivery room, and be qualified and ready to adapt themselves to sudden changes in duties. Only when such drafting is possible, should it be permitted for a delivery suite to be manned for minimal capacity instead of maximal. It is unfair to the doctor and certainly to the nurse, not to mention the patient, to expect a nurse to scrub for a case unless she is accustomed to substituting occasionally and knows the routine of this delivery room.

Importance of Repair Operations.—Many doctors are criticized for having left their patients in bad condition and for not having repaired them. This is not always the fault of the obstetrician. To do a satisfactory perineorrhophy, the patient must be asleep. Competent anesthesia is usually lacking. Here the obstetrician may be at fault in not educating the public to expect, and be willing to pay for as good anesthesia at childbirth as they would expect to provide for the simplest operation. We fail to inform our public of the advancements made in obstetrics, and that a husband is no longer considered competent to supply as an anesthetist. In many hospitals an interne is called to perform this task, which often interferes with his sleep and with his other duties, making it a rather unwelcome call. Some doctors are in the

habit of calling a private anesthetist, but it is not always easy to call him at just the right time. The busier ones are not willing to wait around with the obstetrician for the cervix to dilate. A probable solution is for at least one full-time anesthetist to be constantly available. Economically planned hospital budgets will not permit this. Nurse anesthetists might fill the requirement at a lower figure, but cannot legally be employed in California.

Whatever problem this presents, it does not detract from the fact that lack of skilled anesthesia, among other things, prevents the patient from receiving the best type of attention in the repair of lacerations and episiotomies. A perineorrhophy is entitled to the same consideration postpartum, as it will receive some years later in the operating room. Perhaps it is a misfortune to have so few immediate effects from poor anesthesia, for we continue to be so tolerant.

During the past two years, under such régimes we have routinely repaired the cervix, as well as the perineum, and have demonstrated that it can be done efficiently immediately after delivery, with better ultimate results than cauterization. Furthermore, repairing these cervical lacerations, we are closing an avenue for slight afebrile parametrial inflammations, which, I think, are responsible for many chronic pelvic pains. A secondary trachelorrhophy will come too late to cure these results.

POSTPARTUM CARE

Only little can be said to amplify the years of effort exerted on prenatal care and infant welfare. The same effort, however, has not yet been directed to postpartum care. Obstetrical departments have become commercial footballs. The hospital managements try to make a hospital attractive to the public by offering bargain obstetrical rates. Patients are allowed to leave the hospital in ten days because the hospital has a ten-day flat rate. Usually no exception is made for those with prolonged labors or operative deliveries. We will assume that they received good care during this time, but is ten days long enough for all patients? There might be some difference of opinion as to how long a puerpera should remain in bed, but there is not much argument among surgeons and gynecologists as to how long a perineorrhophy patient should refrain from being on her feet. Why should there be any difference?

The situation might not be so bad if the patient remained in bed after she returned home. Perhaps she planned to do this, but no one warned her that taking care of a baby is a twenty-four-hour job, and the husband, although intensely solicitous, never thought to provide a helper. Eventually they will get one, but in the meantime the mother will become a nervous wreck and it will take her months to recover her poise. Until the baby is a month old the mother should be relieved of all responsibility for his care. We must remain cognizant of the fact that taking care of a baby today is a much greater task than it was years ago. The mother of today has listened to so many lectures and has read so many pamphlets, that the standard she sets for herself is too high.

Some obstetricians who recognize the necessity of postpartum care supply their patients with definite routines to be followed at home, requiring a certain number of hours' rest daily or, better, stating exactly how long she may be up. Should we not expect a more complete return to normal of stretched tissues, and a more normal involution of the uterus, if the patient is more cautious about postpartal activities?

Reference has already been made to the patient's increased weight. If she becomes careless during the puerperium, she may still acquire some undesired poundage. High calorie diets are suggested to stimulate lactation, but probably are overbalanced by the pace of civilization, and result in more weight for the mother but not much more milk for the baby. Breasts may become pendulous during the period of engorgement and lactation, and so the attention to support instituted when the patient first became pregnant must be continued.

Attention to the bowels must be continued until they are normal. The release of abdominal pressure and the patient's inactivity makes her very susceptible to constipation. A definite routine should be supplemented by a lubricant and regular broken doses of laxative. The patient must not strain, nor must the rectum be allowed to remain distended very long. I do not see how an occasional enema over a period of a few weeks could produce a habit, but it is simple enough to realize how a distended rectum for hours might produce permanent damage by retarding involution of the vaginal walls.

More blood may have been lost during delivery than is usual; yet how often is anything done about it? The six weeks' examination should include a hemoglobin determination, and advice for building it up to a normal level should be given.

While enlarging upon the care due women postpartum, reference must be made to the attention they receive after abortions and miscarriages. Rarely can a patient be made to realize the value and necessity of remaining in bed even for a few days. Yet, when a gynecological patient is closely questioned about the onset of certain symptoms, we find that many followed an abortion. In many cases of criminal abortion she has been advised to go about her usual routine as though nothing had happened. Too frequently cases of incomplete abortion, coming to the hospital for curettage because of profuse bleeding, are discharged in a few days without any special directions. The fact that the patient has lost a large quantity of blood is completely ignored.

HOSPITALIZATION IN MATERNITY PRACTICE

Perhaps it is of little moment to speak about improving hospital attentions which are already quite satisfactory, because the large percentage of

babies continue to be born at home, with only the barest essentials in equipment and nursing service. Only an exceptional case will have received anything like proper repairs. Whether these people present a higher percentage of morbidity, we will have no way of demonstrating until new standards of evaluating morbidity become devised. At any rate it is safe to assume that most patients delivered at home will not be so well off as those delivered in a hospital. Perhaps a critical analysis and examination of every patient at six months would tell us just how effective our work is.

Exponents of the various forms of socialized medicine seem to want to do something for obstetrics. A bill submitted to the Assembly of the 1935 California Legislature hinted at such a discrimination. Let us suppose that movements like this did become nation-wide, and obstetrical departments, manned by full time, well-trained staffs, were subsidized and became available for moderate costs. Would these institutions compete with each other to give better service and decrease morbidity, or would they degenerate into a sort of minimal routine? Theoretically, it would seem so, but most doctors, as well as other people, need personal incentive.

Arrangements could easily be made for the centers of population, but the rural territory would be more difficult to accommodate. It would not be practical to scatter numerous maternity hospitals over the country, although it would be practical and possible to furnish capable consultants and nursing service from numerous stations placed at regular intervals over each state, and not compel the general practitioner to wade into situations for which he is not qualified.

It has been proposed that a direct cash repayment be made by the federal government to each mother for all, or a certain portion of money expended for hospitalization or for nursing care. Some countries reward each mother with a fixed sum of money. When this money is actually used for intrapartum and postpartum attentions, it is a definite contribution toward the reduction of maternal morbidity.

IN CONCLUSION

In conclusion, I will simply emphasize the need for more adequate and more informative standards with which to measure our unsatisfactory results. When these are tabulated, greater attention can be directed to the details responsible for the unfavorable percentages. After a certain amount of urging, we hope the hospitals will provide more complete delivery-room facilities, and even skilled obstetrical anesthetists. The antepartum and the more remote postpartum management will continue to be the responsibility of the individual obstetrician. These will require efficient and persistent educational propaganda, for the physician as well as the patient, such as is so effectively instituted for antepartum care.

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GENERAL PARESIS—THE USE OF DRUGS IN ITS TREATMENT*

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DISCUSSION *by George S. Johnson, M.D., San Francisco; Stanley O. Chambers, M.D., Los Angeles; Clifford W. Mack, M.D., Livermore; Samuel D. Ingham, M.D., Los Angeles.*

SINCE our experience in the clinic for neurosyphilis at the Los Angeles County General Hospital has not been reduced to a statistical basis, we have limited ourselves, in this paper, largely to conclusions drawn from a survey of the recent literature. The inadequacy of the routine antisyphilitic remedies (arsphenamins and heavy metals) for general paresis is universally acknowledged. Hence, in the treatment of this disease, one thinks chiefly in terms of tryparsamid or some form of fever therapy.

IMPORTANCE OF ARSPHENAMINS AND HEAVY METALS IN NEUROSYPHILIS

Nevertheless, it may not be amiss to emphasize the importance of the arsphenamins and heavy metals in neurosyphilis. Tryparsamid is not spirocheticidal. After malaria, although spirochetes can no longer, as a rule, be demonstrated in the brains of paretics at necropsy, active lesions in other organs may still be flourishing.[1] Hence, all patients, whether treated by fever-producing agents or tryparsamid, should have additional treatment with the classic antiluetic drugs. Probably one is never justified in using the latter measures at the outset of the treatment. Much valuable time may be lost in this manner, because arsphenamins and the heavy metals do not check the progression of the cerebral pathology.

BISMUTH THERAPY

A word should be said as to the rôle of bismuth in the treatment of neurosyphilis. The work of Hanzlik, Mehrtens, and their co-workers,[2] has definitely established the increased penetrability of iodobismitol into the central nervous system. But bismuth is only mildly spirocheticidal, and nowhere have results with this drug indicated that it is a substitute for tryparsamid or malaria. Its value as an adjuvant to therapy, and its superiority to mercury, are unquestioned.

TRYPARSAMID AND MALARIAL THERAPY

The use of drugs in the treatment of paresis centers about tryparsamid. This drug has a unique action. It is remarkably free from untoward effects, except for the optic nerve injury which occurs in a small percentage of patients. It is an excellent tonic, and after its administration there is usually a pronounced gain in weight and strength. Hence, it can be utilized in states of debility where it would be unwise to employ malaria or other form of fever induction. Here tryparsamid has undisputed sway and fulfils an

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